

### **REMARKS**

Claims 10, 13-17 and 20-28 are pending in the above-identified application. With this Amendment, claims 10, 22, and 24 were amended, claims 20-21 and 27-28 were cancelled, and claim 29 was added. Applicants maintain that no new matter has been added. Accordingly, claims 10, 13-17, 22-26 and 29 are at issue in the above-identified application.

Applicants would like to thank Examiner Tracy Dove for the helpful and courteous discussion held with Applicants' representative on August 24, 2004. During the interview, Applicants' representative and the Examiner discussed claim 10 and prior art *Gao* (U.S. Patent No. 5,756,230).

### **35 U.S.C. § 112 Indefiniteness Rejection of Claims**

Claims 20, 21, 27 and 28 were rejected under 35 U.S.C. § 112, second paragraph, as failing to comply with the written description requirement. Claims 13, 20, 21, 27 and 28 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants have amended claims 10, 13, 20-22, and 27-28 and respectfully request withdrawal of these rejections.

### **35 U.S.C. § 102 Anticipation Rejection of Claims**

Claims 22 and 25-28 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Yasugata* (JP 08-236095). Claims 10, 13-17 and 20-28 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Gao et al.* (U.S. Patent No. 5,756,230). Claims 10, 13-17 and 22-26 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Humphrey et al.* (EP 0730316).

Claim 10 recites a solid-electrolyte secondary battery comprising a positive electrode, a negative electrode, a solid-electrolyte comprising a matrix polymer comprising a first

fluorocarbon polymer having a weight-average molecular weight of *greater than 550,000* and less than 1,000,000, wherein the matrix polymer further comprises a second fluorocarbon polymer having a weight average molecular weight of *greater than 300,000 and less than 550,000*, wherein the matrix polymer comprises *30 percent or more by weight* of the fluorocarbon polymer having a weight-average molecular weight of *greater than 550,000* and less than 1,000,000. Claim 10 thus recites two ranges, one for a first fluorocarbon polymer having a weight-average molecular weight of greater than 550,000 and less than 1,000,000, and a second range for a second fluorocarbon polymer having a weight-average molecular weight of greater than 300,000 and less than 500,000. Additionally, Claim 10 recites that the matrix polymer comprises *30 percent or more by weight* of the fluorocarbon polymer having a weight-average molecular weight of *greater than 550,000* and less than 1,000,000.

Yasugata relates to a separator molded by adding polyvinylidene fluoride to polyethylene, and *not* formed by adopting a solid electrolyte like the present invention. Therefore, the present invention cannot be anticipated by Yasugata.

With respect to *Gao et al.*, though the invention of *Gao et al.* teaches polyvinyl fluoride and polyhexafluoropropylene as homopolymers, it does not teach using a polyvinylidene fluoride, as recited in claims 13 and 29. Further, while *Gao et al.* teaches a homopolymer having a weight-average molecular weight of 50,000 to 900,000 and a copolymer having a weight-average molecular weight of the 10,000 to 900,000, *Gao et al.* fails to teach a polymer having a weight-average molecular weight of greater than 300,000 and less than 550,000, as recited in claim 10 and 23. Therefore, the present invention is not anticipated by Gao's invention.

With respect to *Humphrey et al.*, *Humphrey* describes a polymer having two different peaks, as shown in Table 3. The only polymer described in *Humphrey* to have a weight-average

molecular weight of 550,000 or more is KYNAR 460. It is understood that KYNAR 460 is homopolymer of polyvinylidene fluoride from Table 4 of *Humphrey et al.* However, from only the description that the polymer has two peaks, it is not clear where the two peaks exist. Therefore, it cannot be said that Humphrey's invention has the same composition as the claims of the U.S. Patent Application of the present invention.

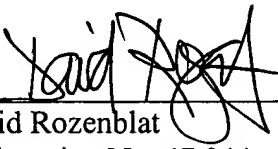
The present invention uses a solid electrolyte which has excellent adhesive properties with the electrode active substance. Further, claim 1 recites a first fluorocarbon polymer having a weight average molecular weight of greater than 550,000 and less than 1,000,000, which improves the adhesive properties of the solid electrolyte. Claim 1 further recites a second fluorocarbon polymer having a weight-average molecular weight of 300,000 to 550,000, which facilitates the forming of a coating film. Neither the first nor the second fluorocarbon polymers are suggested or described in *Humphrey*.

Accordingly, Applicants submit that the claimed invention is not anticipated by nor obvious over the applied references, either alone or in combination. Withdrawal of these grounds of rejection is respectfully requested.

In view of the foregoing, Applicant submits that the application is in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

Dated: November 11, 2004

By:   
David Rozenblat  
Registration No. 47,044  
SONNENSCHN NATH & ROSENTHAL LLP  
P.O. Box 061080  
Wacker Drive Station, Sears Tower  
Chicago, Illinois 60606-1080  
(312) 876-8000

14401960